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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/985,754	11/06/2001	Yoshiro Kokuryo	500.40833x00	4338

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EXAMINER	
ZHENG, EVA Y	

ART UNIT	PAPER NUMBER
2634	

DATE MAILED: 06/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/985,754	KOKURYO ET AL.	
	Examiner	Art Unit	
	Eva Yi Zheng	2634	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 November 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,8 and 11* is/are rejected.

7)☒ Claim(s) *2-7,9,10 and 12-20* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *06 November 2001* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *6/15/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. Figure 7, 9 and 10 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

2. Claim 1 is objected to because of the following informalities: on line 14, change recitation: "said frame" to – the frame --, in order to avoid lack of antecedent basis. Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1, 8 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cugnini et al (US 6,389,070 B1) in view of Sollenberger (US 4,695,969).

a) Regarding claim1, Cugnini et al disclose a demodulation method for reproducing data from a signal received via a signal transmission path, said demodulation method comprising the steps of:

receiving (10 in Fig. 1) a signal including a series of frames each containing a training signal for automatic equalization processing and a data signal (inherent as video signal);

controlling an amplitude of the received signal by AGC processing to be a predetermined level (AGC and 14 in Fig. 1; Col 2, L 6-7);

setting values of a time constant of said AGC processing (as shown in Fig. 1).

demodulating said received signal processed by said AGC processing (18 in Fig. 1; Col 2, L 7-8);

Cugnini et al disclose all the subject matter described above except for the specific teaching of periodically conducting automatic equalization processing.

However, Sollenberger discloses a technique for converging the tap-weight coefficients of an equalizer, wherein

periodically conducting automatic equalization processing to the demodulated signal so as to adapt the demodulated signal to characteristics of the signal transmission path based on each training signal; and updating repetition period of the automatic equalization processing so as to have a predetermined relation (as shown in Fig. 1; Col 2, L39-Col 4, L28).

Therefore, it is obvious to one of ordinary skill in art to replace the equalizer in the receiver system by Cugnini et al. with improved equalizer technique by Sollenberger. By doing so, improve received signal quality, decrease multipath interference, and reduce signal error rate.

b) Regarding claim 11, Cugnini et al disclose a demodulation apparatus for reproducing data from a signal received via a signal transmission path, said demodulation apparatus comprising the steps of:

a signal input section for receiving (10 in Fig. 1) a signal including a series of frames each containing a training signal for automatic equalization processing and a data signal (inherent as video signal);

an AGC circuit for conducting AGC processing on an amplitude of an received signal from said signal input section to making the amplitude to a predetermined level (AGC and 14 in Fig. 1; Col 2, L 6-7);

setting values of a time constant of said AGC processing (as shown in Fig. 1).

A demodulation equalization circuit for demodulating processed on an output signal by said AGC circuit (18 in Fig. 1; Col 2, L 7-8);

Cugnini et al disclose all the subject matter described above except for the specific teaching of periodically conducting automatic equalization processing.

However, Sollenberger discloses a technique for converging the tap-weight coefficients of an equalizer, wherein

an automatic equalization circuit including a filter the automatic equalization circuit updating tap coefficients of the filter based on each training signal separated from

the signal demodulated by the demodulation circuit, and conducting automatic equalization processing so as to adapt said demodulated signal to characteristics of the signal transmission path; and updating repetition period of the automatic equalization processing so as to have a predetermined relation (as shown in Fig. 1; Col 2, L39-Col 4, L28).

Therefore, it is obvious to one of ordinary skill in art to replace the equalizer in the receiver system by Cugnini et al. with improved equalizer technique by Sollenberger. By doing so, improve received signal quality, decrease multipath interference, and reduce signal error rate.

c) Regarding claim 8, Sollenberger discloses a demodulation method according to claim 1, wherein said step of conducting automatic equalization processing comprises the steps of:

generating such correction coefficients as to make a received training signal coincide With a predetermined reference training signal (as shown in Fig. 1; Col 2, L39-Col 4, L28); and

automatic equalizing said received signal based on said correction coefficients (as shown in Fig. 1).

Allowable Subject Matter

5. Claims 2-7, 9-10 and 12-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eva Y Zheng whose telephone number is 571 272-3049. The examiner can normally be reached on M-F, 7:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on 571 272-3056. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Eva Yi Zheng
Examiner
Art Unit 2634

SHUWANG LIU
PRIMARY EXAMINER

June 15, 2005